

REMARKS

The Examiner rejected Claims 1-5 and 11-15 under the provision of 35 U.S.C. 102 (b) as being anticipated by Pretorius et al., U.S. Patent No. 4,208,284. Reconsideration is respectfully requested.

A prima facie case of anticipation, according to the Federal Circuit, "requires the presence in a single prior art disclosure of each and every element of the claimed invention." *Lewmar Marine v. Bariant, Inc.* 3 U.S.P.Q.2d 1766, 1767 (Fed. Cir. 1987). Pretorius does not meet that standard.

The present invention is directed to a method for manufacturing a packing made of a three-dimensional net-like structure which constitutes an internal structure of a device which performs material transfer, heat exchange or mixing between gases, liquids or gas and liquid, having an internal structure divided into a plurality of chambers or channels connected to one another. The three-dimensional net-like structures are made of a plurality of unit structures which are arranged continuously in vertical and horizontal directions. Each unit structure is formed by converging and dispersion of three line elements, and wherein the three line elements converge by binding together.

Amended Claims 1-2 and 11-12 point out that **each line element extends continuously from top to bottom of the packing**, or the other three dimensional structure. This arrangement allows liquid to flow along the lines which constitute the wire or twine due to capillary action and thus the flow of liquid along the line element is not interrupted midway between the top and the bottom of the packing.

The Pretorius patent discloses that wavers in a honeycomb pattern or other type of a grid pattern, **are stacked on top of one another and are inter connected at isolated points**. The grid material may be composed of a wire mesh that is alternatively connected at staggered locations in a face to face manner. The three-dimensional structure of the Pretorious patent are composed of plural wavers stacked on top of one another and **does not provide a continuous flow path along one line**

element from the top to the bottom of the three-dimensional net like structure that is pointed out in the amended claims of the present application. The Pretorious patent discloses a downward flow of liquid that flows along the lines of one waver which is interrupted at each connecting spot on two vertically disposed wavers which will prevent the uniform flow of liquid.

Since the Pretorious reference clearly does not teach that each line element extends continuously from top to bottom of the packing, disclosing a three-dimensional structure composed of plural wavers stacked on top of one another, alternatively connected at staggered locations, and does not provide a continuous flow path along one line element from the top to the bottom of the three-dimensional net like structure, the § 102(b) rejection over Pretorious must fail. Removal of the rejection is therefore requested.

Next, the Examiner rejected Claims 6-10 and 16-20 under 35 U.S.C. 103(a) as being unpatentable over Pretorious. Again, reconsideration is respectfully requested.

A finding of obviousness under §103 requires a determination of the scope and content of the prior art, the level of ordinary skill in the art, the differences between the claimed subject matter and the prior art, and whether the differences are such that the subject matter as a whole would have been obvious to one of ordinary skill in the art at the time the invention was made. *Graham v. Deere* 383 U.S. 1 (1966). The relevant inquiry is whether the prior art suggests the invention and whether the prior art provides one of ordinary skill in the art with a reasonable expectation of success. *In re O'Farrell* 853 F.2d 894, 903 (Fed. Cir. 1988).

The Examiner notes that Pretorious discloses: “porous packing having three-dimensionally interleading...” at col. 3, lines 37-52; an “apparatus for achieving mass transfer of mutually miscible substances...” at col. 4, lines 21-41; “the structure according to FIG. 10... wavers stacked on top of one another and interconnected on the isolated points...” at col. 15, lines 63-68; and “...grid material of the webs of FIG. 12 may ... alternately spot connected face to face at staggered localities...” at col. 16, lines 1-24. However, there is no disclosure or suggestion to use line elements which extend continuously from top to bottom of the packing facilitating a continuous flow

path along one line element from the top to the bottom of the three-dimensional net like structure that is pointed out in the amended claims of the present application.


It is maintained that the prior art references do not teach or suggest the present invention and the present claims are not rendered unpatentable under § 103(a) over the references of record.

The prior art which has been made of record has also been considered, but it is submitted that no teachings can be derived therefrom to teach or suggest applicant's invention as claimed herein.

In view of the foregoing discussion, applicant respectfully submits that the pending claims are allowable over the cited prior art. Allowance of the claims is therefore respectfully solicited.

An early and favorable action is earnestly solicited.

Respectfully submitted,



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